WHAT IS CLAIMED:

1. An implantable medical device, comprising:
a body portion having an inner surface and an outer surface; and
a roughened area formed on the inner surface of the body portion.

2. The medical device of claim 1, wherein the roughened area includes asperities.

3. The medical device of claim 2, wherein the asperities comprise material deposited on the area of the inner surface of the lens that is roughened.

4. The medical device of claim 1, wherein the roughened area is an area of the body portion wherein material has been selectively etched from the body portion.

5. The medical device of claim 1, wherein the roughened area includes substantially the entire inner surface of the body portion.

6. The medical device of claim 1, wherein the body portion includes first and second ends and the roughened area is a portion of the inner surface of the body portion adjacent the first and second ends such that a middle portion of the inner surface of the body portion is smooth.

7. The medical device of claim 1, wherein the roughened portion has a roughness factor greater than 40 nm.

8 The medical device of claim 1, wherein the roughened portion has a roughness factor greater than 100 nm.

9. The medical device of claim 1, further comprising a layer of non-thrombogenic material formed on the inner surface of the body portion.

10. The medical device of claim 1, wherein the body portion includes a wall having a selected thickness defined by the inner and outer surfaces of the body portion, and wherein the roughened portion includes at least one region where the wall is thinner than the selected thickness.

11. The medical device of claim 10, wherein the roughened area includes a groove in the inner surface.

12. The medical device of claim 10, wherein the roughened area covers substantially the entire inner surface of the body portion.

13. The medical device of claim 10, wherein the body portion further includes a first end and a second end, and wherein the roughened portion covers selected regions adjacent the first and second ends, the body portion also having a middle portion that is substantially smooth.

14. The medical device of claim 10, further comprising a coating layer formed on the inner surface of the body portion.

15. A method of manufacturing a stent with roughened areas on an inner surface of the stent, comprising:

providing a generally tubular section with a desired thickness, said tubular section having an outer surface and an inner surface;

roughening selected portions of the inner surface of the tubular section; and

removing material from the tubular section to form a desired stent pattern.

16. The method of claim 15, wherein removing material includes laser cutting the desired pattern in the tubular section.

17. The method of claim 15, wherein roughening selected portions of the inner surface of the tubular member includes:

mounting the tubular member on a rotating mechanism;

rotating the tubular member;

pressing a machining tool against a selected area of the inner surface of the tubular member to remove material from the selected area.

18. A method of manufacturing a stent having an inner surface with roughened areas, comprising:

providing a generally planar section with a desired thickness, said generally planar section having a first surface and a second surface;

roughening selected portions of the first surface of the generally planar section;

removing material from the generally planar section to form a desired stent pattern; and

rolling the generally planar section into a tubular shape such that the first surface forms an inner surface of the tubular shape and the second surface forms an outer surface of the tubular shape.

19. The method of claim 18, wherein rolling the generally planar section into a tubular shape occurs after removing material from the generally planar section to form the desired stent pattern.

20. The method of claim 18, wherein removing material to form the desired stent pattern includes laser cutting the desired stent pattern in the generally planar section.

21. The method of claim 18, wherein roughening selected portions of the first surface of the generally planar member occurs after the generally planar member has been rolled into a tubular shape, and wherein roughening includes:

mounting the tubular shape on a rotating mechanism;

rotating the tubular shape;

pressing a machining tool against a portion of the inner surface of the tubular shape until a selected area of the tubular shape portion is roughened.

22. A method of securing a stent to a balloon, comprising:

providing a stent with roughened areas on an inner surface thereof;

positioning the stent onto an outer surface of the balloon;

crimping the stent onto the balloon, whereby the roughened areas on the stent inner surface engage the outer surface of the balloon.

23. A method of securing a stent to a balloon, comprising:

positioning a stent having asperities on an inner surface thereof onto an outer surface of a balloon;

crimping the stent onto the balloon, by applying inward pressure against an outer surface of the stent thereby engaging the asperities on the inner surface of the stent with the outer surface of the balloon.

24. A method for making an implantable medical device, comprising:

forming asperities on a designated region of an inner surface of a tubular member; and

cutting a stent pattern into the tubular member.

25. The method of claim 24, further comprising protecting an outer surface of the tubular member while forming the asperities on the inner surface of the tubular member.

26. The method of claim 24, wherein forming the asperities includes forming the asperities on designated regions of the tubular member adjacent a first and second end of the tubular member defined by a middle region of the tubular member devoid of asperities.

27. The method of claim 24, wherein forming the asperities includes projecting grit at the designated region.

28. The method of claim 24, wherein forming the asperities includes depositing material onto the designated region.

29. The method of claim 28, wherein depositing material includes adding particles of the material to the designated region and bonding the particles to the inner surface of the tubular member within the designated region.

30. The method of claim 24, wherein forming the asperities includes

applying a chemical etchant to the designated region; and

rinsing the chemical etchant off of the designated region.

31. The method of claim 30, further comprising:

applying a mask having a pattern of openings to the designated region; and

etching the inner surface of the tubular member through the openings.

32. The method of claim 24, wherein forming the asperities includes machining the inner surface of the tubular member in the designated area.

33. The method of claim 32, wherein machining includes laser cutting.

34. The method of claim 24, further comprising:

applying a coating of a selected material over the asperities.

35. The method of claim 28, wherein depositing material includes sputtering material onto the inner surface of the tubular member in the designated area.

36. A method of making a stent, comprising:

sputtering material onto a designated area of an inner surface of a tubular member to form asperities; and

cutting a stent pattern into the tubular member by removing tubular member material.

37. A method of making a stent, comprising:

forming asperities on a designated region of an inner surface of a tubular member;

cutting a stent pattern into the tubular member; and

applying a coating to an outer surface of the tubular member to protect the outer surface while forming the asperities on the inner surface.

38. The method of claim 37, further comprising removing the coating on the outer surface after forming the asperities is completed.

39. The method of claim 38, further comprising applying a coating to the inner surface of the tubular member after removing the coating on the outer surface of the tubular member.

40. A method of manufacturing a stent having an inner surface with roughened areas, comprising:

providing a generally planar section with a desired thickness, said generally planar section having a first surface and a second surface;

forming asperities on selected portions of the first surface of the generally planar section to roughen the selected portions of the first surface;

removing material from the generally planar section to form a desired stent pattern; and

rolling the generally planar section into a tubular shape such that the first surface forms an inner surface of the tubular shape and the second surface forms an outer surface of the tubular shape.

41 The method of claim 40, wherein forming asperities includes sputtering material onto the selected portions of the first surface.

42. The method of claim 40, further comprising applying a layer of protective material to the selected portions of the first surface to protect the asperities before removing material from the generally planar section to form the desired stent pattern.

43. The method of claim 40, further comprising applying a layer of protective material to the second surface before forming asperities on the first surface.

44. The method of claim 43, further comprising removing the applied layer of protective material from the second surface after forming asperities on the first surface.

45. The method of claim 44, further comprising applying a coating to the first surface.

46. The method of claim 45, wherein the coating is a bio-compatible coating for reducing interaction between the asperities and fluid flow in a body lumen.

47. A method of manufacturing a stent having an inner surface with roughened areas, comprising:

providing a generally planar section with a desired thickness, said generally planar section having a first surface and a second surface;

forming asperities on selected portions of the first surface of the generally planar section;

rolling the generally planar section into a tubular shape such that the first surface forms an inner surface of the tubular shape and the second surface forms an outer surface of the tubular shape; and

removing material from the tubular shape using a laser to form a desired stent pattern.

48. The method of claim 47, wherein forming asperities includes sputtering material onto the selected portions of the first surface.

49. The method of claim 47, further comprising applying a layer of protective material to the selected portions of the first surface to protect the asperities before removing material from the generally planar section to form the desired stent pattern.

50. The method of claim 47, further comprising applying a layer of protective material to the second surface before forming asperities on the first surface.

51. The method of claim 50, further comprising removing the applied layer of protective material from the second surface after forming asperities on the first surface.

52. The method of claim 51, further comprising applying a coating to the first surface.

53. The method of claim 52, wherein the coating is a bio-compatible coating for reducing interaction between the asperities and fluid flow in a body lumen.

54. A method of manufacturing a stent having an inner surface with roughened areas, comprising:

providing a generally planar section with a desired thickness, said generally planar section having a first surface and a second surface;

applying a layer of protective material to the second surface before forming asperities on the first surface;

forming asperities on selected portions of the first surface of the generally planar section;

removing the layer of protective material from the second surface;

rolling the generally planar section into a tubular shape such that the first surface forms an inner surface of the tubular shape and the second surface forms an outer surface of the tubular shape;

removing material from the tubular shape using a laser to form a desired stent pattern; and

applying a coating of a bio-compatible material to the inner surface.

55. A method of manufacturing a stent having an inner surface with roughened areas, comprising:

providing a generally planar section with a desired thickness, said generally planar section having a first surface and a second surface;

forming asperities by sputtering material onto selected portions of the first surface of the generally planar section;

rolling the generally planar section into a tubular shape such that the first surface forms an inner surface of the tubular shape and the second surface forms an outer surface of the tubular shape;

removing material from the tubular shape using a laser to form a desired stent pattern; and

applying a coating of a bio-compatible material to the inner surface.

56. A method of manufacturing a stent having an inner surface with roughened areas, comprising:

providing a generally planar section with a desired thickness, said generally planar section having a first surface and a second surface;

applying a layer of protective material to the second surface before forming asperities on the first surface;

forming asperities by sputtering material onto selected portions of the first surface of the generally planar section;

removing the layer of protective material from the second surface;

rolling the generally planar section into a tubular shape such that the first surface forms an inner surface of the tubular shape and the second surface forms an outer surface of the tubular shape;

removing material from the tubular shape using a laser to form a desired stent pattern; and

applying a coating of a bio-compatible material to the inner surface.

57. An implantable medical device, comprising:

a body portion having an inner surface and an outer surface;

an asperity formed on a selected portion of the inner surface of the body portion; and

a coating of a bio-compatible material applied to the inner surface of the body portion over the asperity.

58. An implantable medical device, comprising:

a body portion formed from a tubular member, the body portion having an inner surface and an outer surface;

a plurality of asperities formed on a selected region of the inner surface of the body portion; and

a coating of a material applied over the asperities for providing reduced interaction between the asperities and fluid flow in a body lumen.

59. An implantable medical device, comprising:

a tubular body portion having an inner surface and an outer surface;

a roughened area formed on the inner surface of the body portion, wherein the roughened area has a roughness factor greater than 40 nm.

60. An implantable medical device, comprising:

a tubular body portion having an inner surface and an outer surface;

a roughened area formed on the inner surface of the body portion, wherein the roughened area has a roughness factor greater than 40 nm; and

a coating of a material applied over the roughened area, the coating providing reduced interaction between the asperities and fluid flow in a body lumen.

61. An implantable medical device, comprising:

a tubular body portion having an inner surface and an outer surface;

friction increasing means formed on the inner surface of the body portion; and

means for providing reduced interaction between the friction increasing means and fluid flow in a body lumen.

62. An implantable medical device, comprising:

a tubular body portion having an inner surface and an outer surface;

friction increasing means formed on a selected area of the inner surface of the body portion, the selected area of the inner surface having a roughness factor greater than 40 nm.

63. An implantable medical device, comprising:

a tubular body portion having an inner surface and an outer surface;

friction increasing means formed on a selected area of the inner surface of the body portion, the selected area of the inner surface having a roughness factor greater than 40 nm; and

means for providing reduced interaction between the friction increasing means and fluid flow in a body lumen.

64. An implantable medical device, comprising:

a tubular body portion having an inner surface and an outer surface, the inner surface being measurably rougher than the outer surface.

65. A method of manufacturing a stent; comprising:

providing a generally tubular section with a desired thickness, the tubular section having an outer surface that is measurably smoother than the inner surface of the tubular section; and

removing material from the tubular section to form a desired stent pattern.

66. The method of claim 64, further comprising preferentially polishing portions of the inner surface of the tubular section.